UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,694	10/07/2003	Akihiko Shiraishi	1232-5173	5889

27123 7590 01/29/2007
MORGAN & FINNEGAN, L.L.P.
3 WORLD FINANCIAL CENTER
NEW YORK, NY 10281-2101

EXAMINER	
LIU, LIN	
ART UNIT	**PAPER NUMBER**
2609	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## *Office Action Summary*	**Application No.** 10/681,694	**Applicant(s)** SHIRAISHI ET AL.	
	Examiner Lin Liu	**Art Unit** 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/07/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) *15-27* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10/07/2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species: species 1: figures 1-7, species 2: figures 8-9B, and species 3: figures 10-15B.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, No claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

2. During a telephone conversation with Matthew K. Blackburn on January 9, 2007 a provisional election was made without traverse to prosecute the invention of species 1, claims 1-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-27 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification Objection

4. The disclosure is objected to because of the following informalities: on page 8, line 25, "step S14" is uncorrected. This should be step S16.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 13 and 14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claim 13 recites a computer program product implementing a method. A program causing a computer to execute a method that is not tangibly embodied on a computer readable medium is non-statutory subject matter.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims **1-3, 7-9, 13 and 14** are rejected under 35 U.S.C 102 (b) as being anticipated by **Soshi (Patent No.: 5,400,110).**

Consider **claim 1,** Soshi teaches an image sensing apparatus comprising: a memory (col. 3, line 47 memory) which stores information on a photographing frequency in association with object distance information (col. 4, lines 32-34, noted that distance data D1 is stored) and brightness information (col. 3, lines 54-58, noted that the luminance signal is sent to control circuit, which manages the memory); an acquisition device (fig. 1, photometering sensor 26) which acquires an object brightness value (col. 3, lines 54-58, noted that it detects the luminance of the object) on the basis of image information sensed by an image sensing device; and a control device (fig. 1 control circuit 24) which refers (col. 3, lines 44-47, noted that the operations in executing the control circuit is stored in the memory) to said memory to detect an object distance (col. 5, lines 6-11, noted that after all the data are inputted in the memory control circuit calculates the object distance) having the highest photographing frequency among object distances corresponding to the acquired object brightness value (col. 4 line 67 to col. 5 line 11, noted that object luminance is used to obtain exposure factors, which are then used to compute the object distance by control circuit), and controls image sensing operation (col. 3 lines 44-47, noted that control circuit 24 controls the whole operation of the camera) on the basis of the detected object distance information.

Consider **claim 2**, Soshi teaches the apparatus according to claim 1, wherein said control device (fig. 1 control circuit 24) sets a scanning range (col. 4, lines 59-62, noted the object distance data D1 and D2 measured by detecting means 14) of a focus adjustment lens for determining an in-focus position by limiting the scanning range (col. 4, lines 59-62, noted the object distance data D1 and D2 measured by detecting means 14) to a predetermined range including a selected object distance, and determines an in-focus position (col. 5, lines 6-11, noted that the desired object distance is obtained based on the data stored in memory).

Consider **claim 3**, Soshi teaches the apparatus according to claim 2, wherein when no in-focus position (col. 5, lines 11-12, noted that object distance D1 and D2 are not within the depth field) can be determined, said control device drives and controls the focus adjustment lens to a position corresponding to the selected object distance (col. 5 line 67 to col. 6 line 4, noted that control circuit operates to make the two object distances fall within the range).

Consider **claim 7,** Soshi teaches an image sensing method comprising: acquiring an object brightness value (col. 3, lines 54-58, noted that photometering sensor 26 detects the luminance of the object) on the basis of image information sensed by an image sensing device; referring to a memory (col. 3, line 47 memory) which stores information on a photographing frequency in association with object distance information (col. 4, lines 32-34, noted that distance data D1 is stored) and brightness information (col. 3, lines 54-58, noted that the luminance signal is sent to control circuit, which manages the memory), thereby detecting an object distance (col. 5, lines 6-11, noted that after all the data are inputted in the memory control circuit calculates the object distance) having the highest photographing frequency among object distances corresponding to the acquired object brightness value (col. 4 line 67 to col. 5 line 11, noted that object luminance is used to obtain exposure factors, which are then used to compute the object distance by control circuit); and controlling image sensing operation (col. 3 lines 44-47, noted that control circuit 24 controls the whole operation of the camera) on the basis of the detected object distance information.

Consider **claim 8**, Soshi teaches the method according to claim 7, wherein as control (fig. 1 control circuit 24) of the image sensing operation (col. 3 lines 44-47, noted that control circuit 24 controls the whole operation of the camera), a scanning range of a focus adjustment lens for determining an in-focus position is set by limiting the scanning range (col. 4, lines 59-62, noted the object distance data D1 and D2 measured by detecting means 14) to a predetermined range including a selected object distance, and an in-focus position is determined (col. 5, lines 6-11, noted that the desired object distance is obtained based on the data stored in memory).

Consider **claim 9**, Soshi teaches the method according to claim 8, wherein as control (fig. 1 control circuit 24) of the image sensing operation (col. 3 lines 44-47, noted that control circuit 24 controls the whole operation of the camera), when no in-focus position (col. 5, lines 11-12, noted that object distance D1 and D2 are not within the depth field) can be determined, the focus adjustment lens is driven and controlled to a position corresponding to the selected object distance (col. 5 line 67 to col. 6 line

4, noted that control circuit operates to make the two object distances fall within the range).

Consider **claim 13**, Soshi teaches a program (col. 3, lines 44-47, noted that a program for control circuit in controlling the whole operation of the camera is stored in an internal memory) for realizing an image sensing method defined in claim 7.

Consider **claim 14**, Soshi teaches a storage medium (col. 3, lines 44-47, noted that a program for control circuit in controlling the whole operation of the camera is stored in an internal memory) which stores a program defined in claim 13.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims **4-6 and 10-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Soshi (Patent No.: US 5,400,110)** in view of **Takahashi (Patent no.: US 7,009,641).**

With respect to **claim 4,** Soshi teaches the apparatus according to claim 1, wherein when an object distance corresponding to an in-focus position is not more than thresholds (col. 5, lines 11-12, noted that the object distance D1 and D2 is not within tile depth of field).

In an analogous art, Takahashi teaches the acquired brightness value (col. 15, lines 13-14, subject brightness) is not more than thresholds (fig. 13, step S503 and col. 15, lines 13-16, noted that the subject brightness is compared with a predetermined value whether it is equal or lower) and control device (fig. 2, CPU 21) controls the image sensing operation to indoor (fig. 13, operations from S503- S504, col. 15, lines 16-20, noted that the indoor photographing operation is determined) image sensing operation.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the device of Soshi by incorporating the method as taught by Takahashi in order to intelligently recognize whether the scene requires indoor or outdoor image sensing mode (fig. 13, steps S503, S504 and S507, noted that the step S503 determines whether the scene is indoor or outdoor based on the brightness value captured).

With respect to **claim 5,** Soshi teaches all claimed limitation with the exception that he does not explicitly teach the apparatus according to claim 4, wherein as the indoor image sensing operation, an emission amount of test emission of emitting light in advance in order to set an emission amount of an illumination device for illuminating an object is set smaller than an outdoor emission amount.

In an analogous art, Takahashi teaches the apparatus according to claim 4, wherein as the indoor image sensing operation (fig. 13, indoor operations from S503-S504), an emission amount of test emission of emitting light (fig. 13, step S504 and col. 15, lines 20-23, noted that the fluorescent light is determined) in advance in order to set an emission amount of an illumination device for illuminating an object is set smaller (since indoor scene is brighter with fluorescent light, thus it is set smaller than outdoor image sensing) than an outdoor emission amount.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the device of Soshi by incorporating the method of determining the light emission as taught by Takahashi in order to determine whether fluorescent light is needed for different photographing scene (fig. 13, steps S503, S504 and S507 and col. 15, lines 20-28).

With respect to **claim 6,** Soshi teaches all claimed limitation with the exception that he does not explicitly teach the apparatus according to claim 4, wherein as the indoor image sensing operation, an extraction range for extracting white image information from the image information sensed by the image sensing device in order to adjust white balance is made by said control device to differ from an outdoor extraction range.

In an analogous art, Takahashi teaches the apparatus according to claim 4, wherein as the indoor image sensing operation (fig. 13, indoor operations from S503-S504), an extraction range for extracting white image information (col. 15, lines 44-49, noted that the white balance gains are determined) from the image information (col. 15, lines 45, color temperature) sensed by the image sensing device (fig. 2, image capturing element 26) in order to adjust (col. 15, lines 44-49, noted that the white balance adjustment gain values are used to adjust the white balance) white balance is made by said control device to differ (col. 16, lines 2-8, noted that white balance adjustment gain values are determined based on the different color temperature, since indoor and outdoor extraction range are different, the white balance adjustment gain values are also computed differently) from an outdoor extraction range.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention modify the device of Soshi by incorporating the method of extracting the white image information as taught by Takahashi in order to adjust the white balance in conformance to the level of the brightness of the object (col. 14, lines 38-44).

With respect to **claim 10,** Soshi teaches the method according to claim 7, wherein as control (fig. 1 control circuit 24) of the image sensing operation (col. 3 lines 44-47, noted that control circuit 24 controls the whole operation of the camera), the acquired object distance corresponding to an in-focus position is not more than thresholds (col. 5, lines 11-12, noted that the object distance D1 and D2 is not within tile depth of field).

In an analogous art, Takahashi teaches the method according to claim 7, wherein when the acquired brightness value (col. 15, lines 13-14, subject brightness) is not more than thresholds (fig. 13, step S503 and col. 15, lines 13-16, noted that the subject brightness is compared with a predetermined value whether it is equal or lower), the image sensing operation is controlled (fig. 2, CPU 21) to indoor image sensing operation (fig. 13, operations from S503- S504, col. 15, lines 16-20, noted that the indoor photographing operation is determined).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the device of Soshi by incorporating the method as taught by Takahashi in order to intelligently recognize whether the scene requires indoor or outdoor image sensing mode (fig. 13, steps S503, S504 and S507, noted that the step S503 determines whether the scene is indoor or outdoor based on the brightness value captured).

With respect to **claim 11,** Soshi teaches all claimed limitation with the exception that he does not explicitly teach the method according to claim 10, wherein as the indoor image sensing operation, an emission amount of test emission of emitting light in advance in order to set an emission amount of an illumination device for illuminating an object is set smaller than an outdoor emission amount.

In an analogous art, Takahashi teaches the method according to claim 10, wherein as the indoor image sensing operation (fig. 13, indoor operations from S503-S504), an emission amount of test emission of emitting light (fig. 13, step S504 and col. 15, lines 20-23, noted that the fluorescent light is determined) in advance in order to set an emission amount of an illumination device for illuminating an object is set smaller (since indoor scene is brighter with fluorescent light, thus it is set smaller than outdoor image sensing) than an outdoor emission amount.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the device of Soshi by incorporating the method of determining the light emission as taught by Takahashi in order to determine whether fluorescent light is needed for different photographing scene (fig. 13, steps S503, S504 and S507 and col. 15, lines 20-28).

With respect to **claim 12,** Soshi teaches all claimed limitation with the exception that he does not explicitly teach the method according to claim 10, wherein as the indoor image sensing operation, an extraction range for extracting white image information from the image information sensed by the image sensing device in order to adjust white balance is made to differ from an outdoor extraction range.

In an analogous art, Takahashi teaches the method according to claim 10, wherein as the indoor image sensing operation (fig. 13, indoor operations from S503-S504), an extraction range for extracting white image information (col. 15, lines 44-49, noted that the white balance gains are determined) from the image information (col. 15, lines 45, color temperature) sensed by the image sensing device (fig. 2, image capturing element 26) in order to adjust (col. 15, lines 44-49, noted that the white balance adjustment gain values are used to adjust the white balance) white balance is made to differ (col. 16, lines 2-8, noted that white balance adjustment gain values are determined based on the different color temperature, since indoor and outdoor extraction range are different, the white balance adjustment gain values are also computed differently) from an outdoor extraction range.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention modify the device of Soshi by incorporating the method of extracting the white image information as taught by Takahashi in order to adjust the white balance in conformance to the level of the brightness of the object (col. 14, lines 38-44).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schinner discloses a digital camera and method of using same to view image in live view mode in patent no.: US 6,900,840. Wakai discloses an optical system and imaging device in patent no.: US 7,019,919. Kawahara discloses an image sensing apparatus, control method for illumination device, flash photographing method, and computer program product in publication no.: US 2001/0019364. Konishi discloses a digital camera and method of controlling the same in patent no.: US 7,164,446.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Liu whose telephone number is (571) 270-1447. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

L.Liu
1/18/07

PATRICK N. EDOUARD
SUPERVISORY PATENT EXAMINER